GOVERNMENT OF INDIA
OCEAN DEVELOPMENT
LOK SABHA

UNSTARRED QUESTION NO:4659
ANSWERED ON:25.04.2000
TECHNOLOGY FOR EXPLORING OCEAN WEALTH
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Will the Minister of OCEAN DEVELOPMENT be pleased to state:

(a) whether a new technology has been developed for exploring the ocean bed to extract commercially important metals;

(b) if so, the details thereof;

(c) the time by which the technology is likely to be fully implemented to explore oceanic wealth; and

(d) the details of places where such technology is proposed to be used?

Answer

MINISTER OF OCEAN DEVELOPMENT

(DR. MURLI MANOHAR JOSHI)

(a) & (b) : Under a joint technology demonstration programme for development of Deep Sea Mining System with Institute for Konstruktion (IKS), University of siegen, Germany, the Department of Ocean Development through its autonomous institution namely National Institute of Ocean Technology, has designed a crawler mounted mining system with special rubber tracks, umbilical cable with an outer steel armour which carries the weight of the vehicle during launch and retrieval and transmits power and signals to the system during operation, a number of transducers for monitoring the speed, direction, stability, pump performance etc., special under water cameras to observe the mining area, etc. The design of the crawler also involves complex integration of mechanical, electrical and instrumentation technologies and is a break through providing a firm basis for the development of a Deep sea Mining system. While the system in its final form will be capable of operating up to 6,000 m water depth, in the initial stages the system has been successfully demonstrated at a depth of 410 m off Tuticorin in the east coast during March, 2000.

(c) It is likely to take about 5 years from now on to establish its technical capabilities to explore the Oceanic Wealth particularly the Polymetallic Nodules from 6000 m depth.

(d) The technology for Ocean Bed Mining presently demonstrated could be used with slight modifications for mining phosphorite deposits and placer minerals, dredging of sand bars in estuaries and other locations where floating dredgers cannot work, to desilt the storage areas of hydro-electric projects to increase their economic life and to survey the sea bed and locate specific living and non-living resources.